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Coal Production

1. Hungary's coal production averaged during peacetime nine million metric tons per year. During the first years of World War II the production increased to about 10 million metric tons a year until 1942, then decreased again on account of the difficulties caused by the shortage of auxiliary materials.

2. The equipment of the mines was worn out during World War II; after the war the entire coal mining industry was in a desolate condition. The Communists began their forced industrialisation program in 1948 and coal mining became again one of the most important factors of the nation's economy. The target in 1950 was 12,500,000 metric tons and the elevated target for 1952 was 18,500,000 metric tons.

3. These targets were never fulfilled. There were months in the last part of 1951 during which the miners produced only about 75% of the target in the year's average, but there were individual months when the production decreased to 62-64% of the official targets. This was a result of the obsolete condition of the equipment and the bad morale of the miners. In September of 1951 the shortage of food was the worst and this even after an excellent harvest. The bulk of the Hungarian crop was exported to other Satellite States (Czechoslovakia, East Germany.).

The Hungarian Coal Reserves

4. Among the different estimates the most up-to-date is that of A Vitalis made in 1946. The data are as follows:

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	Actual reserves	Probable reserves
Bituminous coal	215	250
Brown coal, higher quality (Eocene, Oligocene)	455	273
Brown coal, medium (Miocene, Cretaceous [sic])	417	379
Brown coal, lower quality (Pliocene)	104	939
Total	1,191	1,841

5. The deposits are located geographically as follows:

Quality of Coal	Name of district
Bituminous	Mecsek
Brown coal	Tatabanya
	Esztergom
	Mor
	Pilis
	Ajka
	Varpalota
	Brennbergbanya
	Salgotarjan
	Borsod
Lignite	Northern Borsod
	Mezokovesd
	Matra-Bukk

6. There are extended peat deposits in Hungary, mostly at the Transdanubia, the surroundings of the city Szekesfehervar. The exploitation of the peat began during World War II by a [redacted] firm; after the war the government succeeded [redacted]

7. The mines at Komlo (in the Mecsek district), Ajka, Varpalota and Borsod were extended after World War II.

8. The government intends to build two new miners' towns, one at Varpalota and the other at Sajoszentpeter (Borsod district). Each of the towns will have a probable twenty thousand inhabitants.

9. After World War II both in Hungary and Czechoslovakia, there was a serious shortage of manpower in the mining industry. The sons of the miners had joined the army or the police, where the working conditions were comparatively far better. Now the government makes a great effort to recruit miners, therefore it erects new cities exclusively for the miners. The housing conditions are far better than elsewhere in the country. The miners have free housing and there are government-owned department stores where the prices are 25 percent lower than elsewhere.

10. Mining of the high-grade brown coal is very promising. This sort of Hungarian coal is very useable in industry. The Hungarian power production is based on that coal.

11. The average analysis of the best known Hungarian brown coal (Tatabanya, Salgotarjan) shows the following contents:

Carbon	50%
Hydrogen	4
Oxygen	12
Nitrogen	1
Moisture	14
Ashes	16

Calorific value about 5000 calories per kilogram.

12. Before World War II, lump production was very important. Now the Hungarian power plants work with pulverised fuel, therefore the granulation of the coal is not so important. The lump coal produced is more than sufficient for domestic heating purposes.

Mining methods

13. In general the Hungarian coal mining uses the room-and-piller method. In general

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blasting the coal is required, therefore the Hungarian coal industry has its own industrial explosive factory (Magyar Ipari Robbano Rt., at Peremarton). The use of compressed air was successfully introduced by the leading coal companies. Between the two world wars the Mak and the Salgotarjan have erected large central compressed air plants. Bore hammers and pick axes were among the mechanical equipment used. (The first compressed air-driven drills used in the Hungarian coal industry were imported) Several types of coal-cutters are also in operation, some were manufactured

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14. Less than 20% of the mined coal is produced by the longwall method. In Hungary longwall methods differ . This longwall method is developed for coal seams of exceedingly large thickness.

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15. Coal is hauled mostly by endless rope hauling methods. There are some underground electric-driven rubber-belt conveyors, but there are not too many in use. The lack of mechanization is the cause of the failure of the Hungarian coal mining. The government makes efforts to introduce mechanization of the coal mining, but the Hungarian machine factories do not have the necessary experience in manufacturing coal mining machinery.

16. Banert in Ujpest was the only firm founded before World War II in Hungary for the mining industry. Lately another factory, Hoffher & Schrantz at Budapest, was partly altered to produce mining machines. This latter factory manufactures the "Ajtay" combine (a Hungarian developed mining combine) which is a variant of the Soviet "Dumbas" combine. This combine is not adapted for heavy underground service and will cause great difficulties in the mining operations.

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17. Coal is hauled in comparatively small wagonettes to the screening plants where the mechanical classification is made. Other processing of the coal is an unusual operation in Hungary, except for the mines of Mecsek, where the coal is washed and briquetted.

18. Electric pumps are used in general for mine drainage. The mines of Dorog (Esztergom district) have enormous difficulties with the mine drainage being below the "water-endangered" levels. There was a special method of mining developed with concrete filling.

19. The Hungarian coal mining uses mostly hydraulic backfilling. Tatabanya has developed the most effective backfilling methods. The thickness of seams ranges from six to twenty-five meters, therefore the backfilling is inevitable. But there are plenty of deposits of sand so there are no difficulties with the backfilling.

20. In most of the Hungarian mines the gas conditions necessitate the use of safety lamps. Between the two world wars there was a shortage of gasoline and other oils in Hungary, therefore the lamps used in the mining are mostly electric.

21. Gas conditions in the Hungarian mines are not heavy at all. In spite of that, in 1951 there occurred the most serious mine accident that has ever happened in the history of European coal mining. About 160 miners were killed in this accident. The neglecting of the most primitive safety regulations and forced production were the causes of the accident. Ten hours before the accident it was obvious that the methane content of the air was increasing but the foreman did not stop the underground operations.

The Coal Processing

22. As mentioned above, for a long while a big problem was the size of the coal that was produced. The average Hungarian coal disintegrates easily. Some mines produce more than 75% below 10 millimeters buckwheat coal. During peacetime the underdeveloped Hungarian industry was not able to use such quantities of this small size, therefore the briquetting industry was rapidly developed. Before World War II nine briquetting plants were in operation in Hungary. The increasing power production decreased the importance of the briquetting plants.

23. At the present time [1954] the government has begun a big-scale steel program, at the same time Hungary has no metallurgical coke. Therefore it has done a lot of experimenting to produce metallurgical coke, especially at the Mecsek district, and recently at the Borsod district. The fact that these experiments are not very promising is indicated by an agreement the Hungarian government made with Czechoslovakia in 1951. In the terms of this agreement 40% of the Hungarian consumption of metallurgical coke will be imported from Czechoslovakia beginning in 1954.

24. At the Mecsek district there are washing plants to improve the quality of the coal and there is a pioneer plant using the pneumatic-cleaning process.

25. There are two pioneer plants (at Dorog and Tatabanya) using the Lurghi process for the low-temperature carbonization of coal. These plants lost a lot of their importance in 1937, when Hungary began commercial oil production.

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The Outlook of the Hungarian Coal Industry

26. The Communist government of Hungary has an enormous program for the rapid development of the heavy industry. The demand of industry on electric power is very large compared with present production; at the present time in Hungary three and a half billion kilowatt hours are produced, and 90% of the power is produced from coal.

27. Hungary has natural gas deposits in addition to the Lovassi field (formerly operated by the Socony-Vacuum Co) at the Great Hungarian Plain. The wells are drilled at Debrecen and Puspokladany. But only one steam plant with 15,000 kw output is in operation at Lovassi.

28. At the present time [1954], the emphasis is on quantity rather than quality. If the Hungarian coal industry is to cover the demands of the increasing industry and power production, the coal production must be increased to an amount of 25 million metric tons a year. The present mining methods make this goal impossible. There is an indication that the government realizes this, because in 1951 they made a 25-year agreement with Czechoslovakia, in which Czechoslovakia will import yearly half a billion kwh. Later this will be increased to one billion kwh. To summarize the situation briefly, the Hungarian heavy industry program is, in some respects, a nightmare.

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